HUMBER POLYTECHNIC | Faculty of Applied Sciences & Technology

FAST Times

JANUARY 2026

DEAN'S MESSAGE

Dear Colleagues,

As we step into 2026, I would like to extend my warmest wishes to the FAST community for a Happy New Year! I hope the holiday season brought you moments of joy, laughter, and meaningful time with family and loved ones.

I extend a warm welcome to our new part-time and full-time faculty members who are joining the FAST community this winter term. We are delighted to have you with us, and I look forward to meeting you soon. I am also eager to reconnect with our returning staff and faculty as we begin this new year together.

The January FAST Times shines a spotlight on capstone projects by the inaugural intake of students from the STEAM Academy and our ICT, Architectural Technology and Industrial Woodworking students. I am inspired to see the same curiosity and problem-solving spirit reflected in the STEAM Academy capstone projects of our youngest learners and in the culminating capstone work of our graduating students – reminding us that innovation is a lifelong journey that begins early and continues through higher education and beyond.

As we look ahead, I want to express my sincere gratitude for your dedication and hard work throughout 2025. Your commitment to excellence, passion for teaching, and invaluable contributions drive student success and make Humber such a special place to learn and work.

I am excited about the opportunities that 2026 will bring, and I am confident that through continued collaboration and commitment, we will continue to thrive and make a meaningful impact on the lives of our students.

Wishing you a joyful, healthy, and fulfilling year ahead – one filled with new achievements, personal growth, and shared success.

Happy New Year!
Paul Griffin, PhD.
Senior Dean

FAST Times

JANUARY 2026

HOME SWEET HUMBER

Celebrating and showcasing life at North Campus and Carrier Drive!

INFORMATION & COMMUNICATIONS TECHNOLOGY FALL CAPSTONE PROJECT EXPO

With more than 40 groundbreaking projects from 100+ graduating students of the Class of 2025, it was a celebration of creativity, innovation, and collaboration.

Capstone projects are the heart of Humber's polytechnic approach, where students put their knowledge into action, solving real-world problems with real-world solutions. With the support of our industry partners, our students demonstrated their skills, tackled complex challenges, and proved they're ready to make an impact in the tech world.

Congratulations to the teams who earned honourable mentions for their innovative projects!

- **2 teams from the NEST Program**
- **1 team from the AI Grad Certificate Program**
- **1 team from the Cyber Security and AI Program**
- **1 team from the Information Technology Solutions Program**

INFORMATION & COMMUNICATIONS TECHNOLOGY FALL CAPSTONE PROJECT EXPO (CONT'D)

FAST Times

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INDUSTRIAL WOODWORKING SHOWCASE

INDUSTRIAL WOODWORKING SHOWCASE (CONT'D)

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ARCHITECTURAL TECHNOLOGY CAPSTONE SHOWCASE

ARCHITECTURAL TECHNOLOGY CAPSTONE SHOWCASE (CONT'D)

Share your life on campus images in the next FAST Times issue! Please submit to Jennifer Buchalter: jennifer.buchalter@humber.ca

MINISTER OF ENERGY AND NATURAL RESOURCES AND SECRETARY OF STATE (LABOUR) VISIT BARRETT CENTRE FOR TECHNOLOGY INNOVATION

With federal leaders on hand and students' award-winning skills on full display, Humber Polytechnic's Barrett Centre for Technology Innovation (Barrett CTI) offered a firsthand look at how advanced manufacturing, mechatronics and industry collaboration are shaping the next generation of workforce talent while addressing Canada's productivity challenges and energy needs.

Humber executives were joined by Minister of Energy and Natural Resources Tim Hodgson and Secretary of State (Labour) John Zerucelli for a tour of Barrett CTI that included stops at the Magna Mechatronics Skills Training Room and the CISCO Digital Transformation Zone where they were introduced to Skills Competition training and the various research projects underway.

Emphasized during the tour was Humber's focus on delivering practical, scalable solutions that help government and industry meet clean-energy targets, accelerate project timelines and strengthen Canada's long-term economic competitiveness.

Read the full Humber Today feature story here.

FAST LEARNERS

CAPSTONE SPOTLIGHT

STUDENTS:
Jyselle Camacho, Joanna Joy Parallag

PROGRAM OF STUDY:
Computer System Technician, Information Technology and Infrastructure

TITLE OF PROJECT:
Inventory and Restock Alert System for Boba Stop

INDUSTRY SPONSOR:
Boba Stop

SUBMITTED BY:
Jyselle Camacho

TELL US ABOUT YOUR CAPSTONE PROJECT?

The Boba Stop Inventory Management System is a full-stack web application built to streamline bubble tea shop operations. It enables shops to track ingredients and supplies (such as teas, syrups, pearls, cups, and straws) with real-time updates and automated alerts. A standout feature is low-stock SMS notifications via Twilio, helping prevent supply shortages.

The platform is powered by Next.js 14 with React 19 (TypeScript) on the frontend and Supabase (PostgreSQL) on the backend. It uses responsive, mobile-first design with Tailwind CSS and shadcn/ui components for an intuitive experience. Security is emphasized through signed session cookies, rate limiting, CSRF protection, input validation, and role-based permissions.

The dashboard includes six main modules: Inventory (view/edit products, adjust stock), Suppliers (manage vendor details), Shopping Cart (restock management), Alerts (auto SMS notifications), Analytics (inventory value, stock charts, supplier insights), and Activity Logs (user actions, system alerts).

The system supports multiple roles such as Admin, Owner, and Staff logins. It also offers a fallback mode with local pre-loaded data if the database is unavailable, ensuring continuity. With modular architecture, TypeScript safety, and developer tooling, this project demonstrates modern, secure, and business-focused web development tailored to bubble tea shops.

WHAT WERE SOME OF THE MOST IMPORTANT THINGS YOU LEARNED?

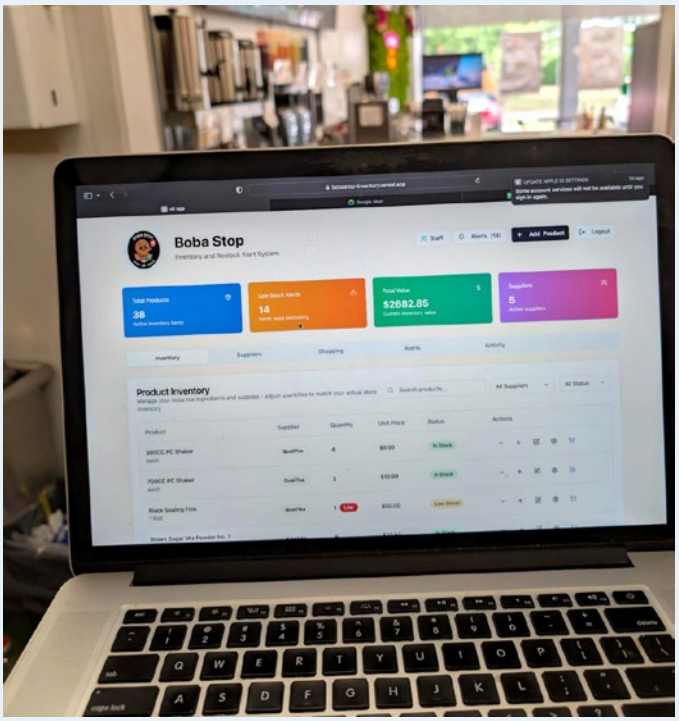
One of the most important things I learned from building the Boba Stop Inventory Management System was how to collaborate effectively on a full-stack project. I focused on the frontend using Next.js, React, and Twilio integration, while my teammate Joy worked on the backend with Supabase. This division of work taught me how to connect our pieces securely and reliably. Beyond technical skills like authentication, role-based access control, and mobile-responsive design, I also gained valuable teamwork skills such as communication, patience, and adaptability as we learned to solve problems together. This experience showed me the importance of both technical expertise and collaboration in IT.

FAST LEARNERS

CAPSTONE SPOTLIGHT (CONT'D)

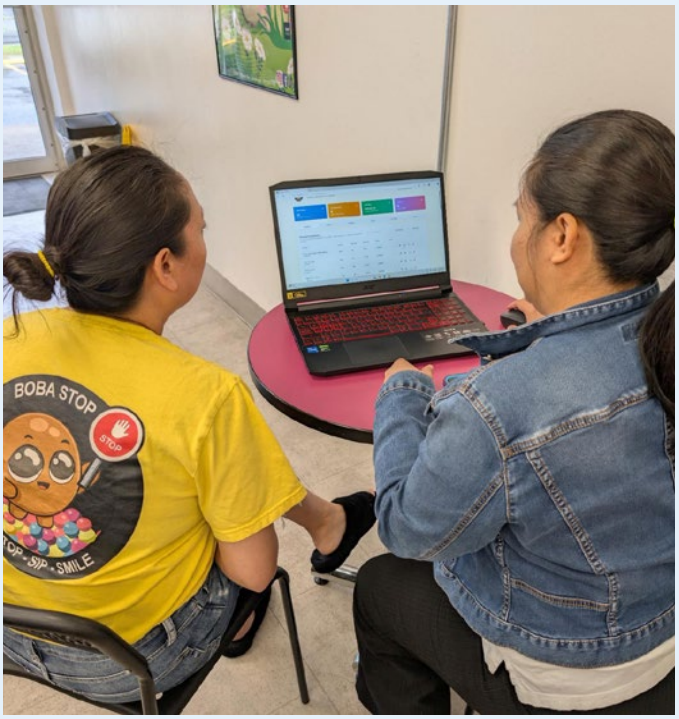
HOW DID HUMBER PREPARE YOU FOR A REWARDING CAREER IN YOUR FIELD?

Humber prepared me for a rewarding career in IT by giving me a strong balance of theory and hands-on practice. Through labs and projects, I gained real world experience in networking, cloud, security, and full-stack development. Courses emphasized not just technical skills, but also problem-solving, teamwork, and adaptability, which are essential in fast-paced IT environments. Our capstone project, the Boba Stop Inventory Management System, allowed me to apply classroom knowledge to solve a real business problem. Humber's supportive faculty, industry-focused curriculum, and opportunities to work with current technologies gave me the confidence and skills to pursue a successful IT career.



WHAT TIPS/ADVICE WOULD YOU GIVE TO STUDENTS INTERESTED IN THIS PROGRAM?

My advice to students interested in Humber's IT program is to take full advantage of hands-on labs and projects, since they mirror real world situations you'll face in the industry. Don't be afraid to ask questions and collaborate. Teamwork is a huge part of IT. Stay organized with your assignments but also explore beyond the classroom by working on personal or capstone projects that showcase your skills. Make use of Humber's resources, faculty support, and career services early on, as they can guide you toward internships and future opportunities. Most importantly, staying curious and continually learning is key in technology.



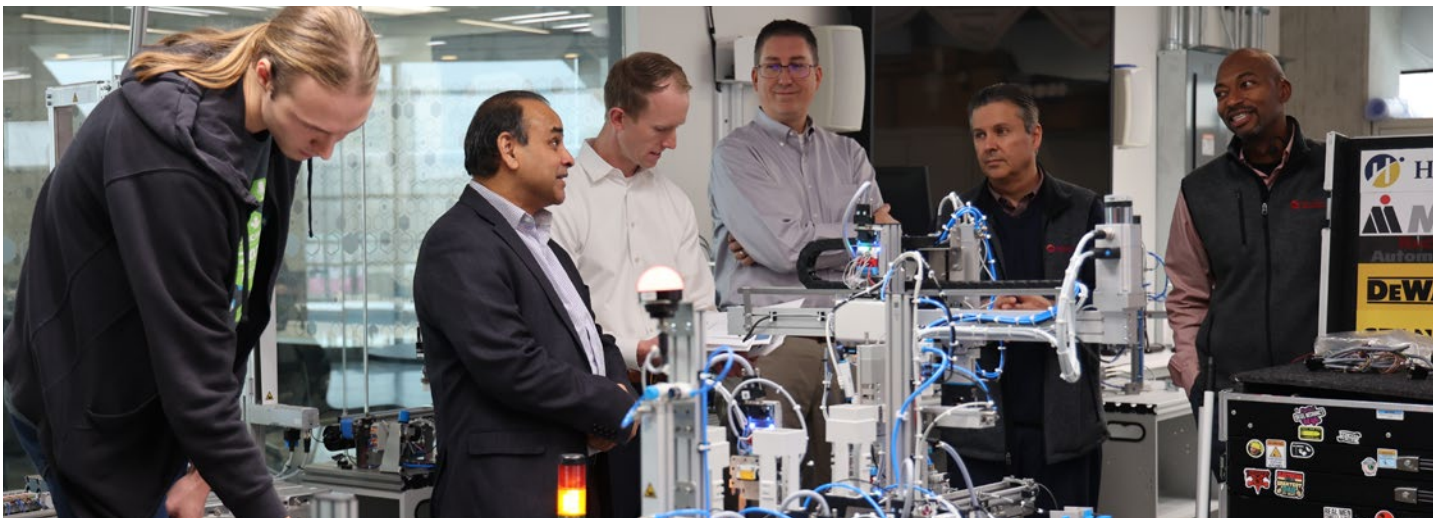
BARRETT CENTRE FOR TECHNOLOGY INNOVATION

ROCKWELL AUTOMATION VISIT AND TOUR

Rockwell Automation is one of the founding members of the Barrett CTI's Advanced Manufacturing Consortium and a partnership that continues to shape the future of advanced manufacturing and education at Humber Polytechnic.

During their visit in December 2025, the team toured our cutting-edge facilities, connected with faculty and researchers, and shared real-world insights with Humber FAST students working on their capstone projects. Rockwell Automation's advanced technologies have been integrated into many applied research and student-led projects - giving learners hands-on experience with industry standard tools.

This collaboration extends beyond a single visit. Rockwell Automation's expertise and technologies deployed on our projects create meaningful opportunities for students, strengthen industry-academic connections, and drive innovation across the manufacturing sector. Together, we're building stronger connections between classroom learning and real-world practice, empowering the next generation of skilled professionals.



THE DIGITAL TECHNOLOGY STUDENT PROJECT SHOWCASE

The Digital Technology Hub Student Project Showcase in December was the culmination of a year of student-driven research and project development at the Hub.

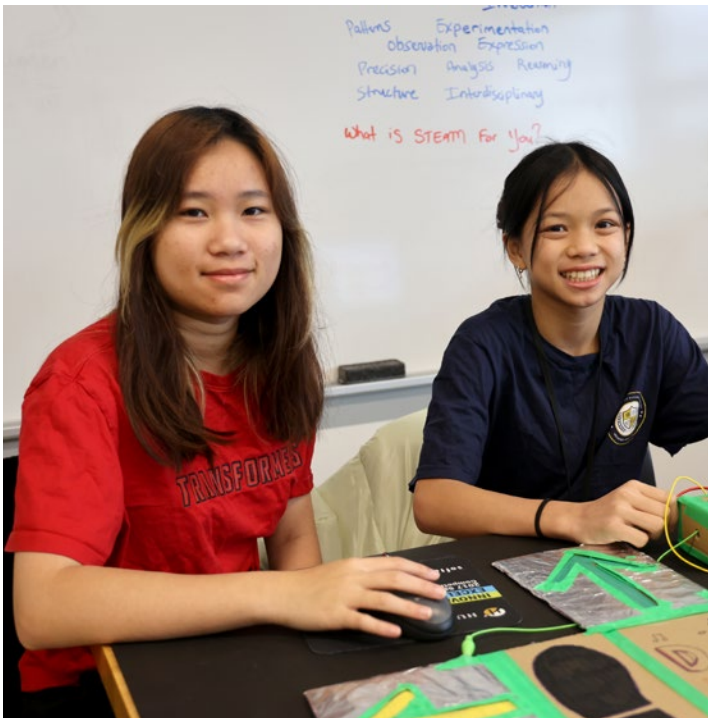
The Digital Technology Hub provides students with access to a dedicated data centre and specialized facilities for exploring topics related to Cybersecurity, AI, and IoT. It's a collaborative environment within the Barrett CTI where students, faculty, staff, and industry experts come together to design, test, and implement solutions to today's most pressing virtual threats.

With cyber risks growing in scale and sophistication, our students are rising to the challenge by building solutions that help organizations operate securely and strengthen economic resilience.

Featured projects included:

- **Data Navigator: AI-Integrated Platform for Data Science Tasks**
- **Hybrid Authentication Leveraging Biometrics & Cryptography**
- **IoT & Cybersecurity Modular Station for the Bottling Industry**
- **Online Cybersecurity Training Game**
- **Cybersecurity Lab Platform Development**

These projects were developed in close partnership with faculty and industry partners. Thank you to LightRing Technology, Crystalline Technologies, BDATA, CISCO, and ITS Humber for their continued support, and to Humber Polytechnic faculty, staff, and especially the Humber FAST students for their dedication and ingenuity!



BARRETT STEAM ACADEMY CAPSTONE PROJECT SHOWCASE

Students of the Barrett STEAM Academy dedicated four weeks to the development of a capstone project designed to showcase the skills and knowledge acquired during the first seven weeks of the program.

Senior-level students were required to use Arduino as the core of their projects, while junior-level students worked with Makey Makey. Senior projects ranged from an autonomous garbage detection system to a “runaway” alarm clock, demonstrating advanced problem-solving and programming skills. Junior projects included a driving simulator and a Magic 8 Ball, highlighting creativity and foundational engineering concepts. Across both groups, students displayed exceptional creativity, collaboration, and innovation which are hallmarks of the Barrett STEAM Academy experience.

The next intake of the Barrett STEAM Academy will run from January 10 to March 28, 2026. If you, or someone you know, is interested in enrolling their child, please visit this link for more information and registration details.

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FAST MILESTONES

Congratulations to the following FAST members who are celebrating a career milestone in January! We truly appreciate your contributions to the Humber FAST community and congratulate you on reaching this important milestone!

JANUARY

25 years
Georges Livanos

15 years
Diogo Barco

10 years
Silvia Navarrete

1 year
Amar Sawadi
Janet Maycenic

UPCOMING EVENTS

January 12
Day & Evening Classes Begin

January 21
The Schulich Builders Scholarships for Skilled Trade Meet & Greet
Centre for Skilled Trades & Technology

WE WANT TO HEAR FROM YOU!

FAST *Times* recognizes and celebrates the achievements of our faculty and students. To share your successes with us, please submit stories and images to Jennifer Buchalter: jennifer.buchalter@humber.ca

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